

I am happy to find that my description of the manners and flight of the albatross agrees so nearly with that of the author just mentioned. He says, however, that this bird constantly dips its head below the surface of the water, during its flight, in search of food.

This I never saw, although I have sometimes watched them for the greater part of the day. Like the Cape petrel they always settled before they seized their prey, and never rose until they had devoured it.

As truth is the grand desideratum in all scientific researches, I do not think it necessary to offer any apology for having set forth my remarks in opposition to those of more experienced men, because I have stated no more than what actually passed under my own observation: whereas the authors above mentioned have written in a great measure from hearsay, and consequently may have been obliged to take on credit a great deal of unauthenticated matter.

[We regret that we cannot find room for LIEUT. HUTTON's daily Journal, kept during his voyage to India. We presume however that the principal facts in natural history observed by him have been alluded to above.—ED.]

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VII.—*Account of Oxygyrus; a new Genus of Pelagian Shells allied to the Genus Atlanta of LESUEUR, with a Note on some other Pelagian Shells lately taken on board the Ship Malcolm. By W. H. BENSON, Esq. Bengal Civil Service.*

The following characters of a new Pelagian shell, taken on the surface of the Southern Atlantic and Indian Oceans, may prove interesting to naturalists, inasmuch as hitherto only one genus of the family, viz. *Atlanta*, has been discovered; and of the remaining family of the order, a single genus, bearing a shell, is known, that of *Carinaria*, of which scarce and beautiful groupe we took, in the Indian Ocean, two new species, which I hope shortly to describe and illustrate. The shell of the genus *Atlanta* was first made known by LAMANON, in a paper sent to France during the progress of LA PEYROUSE's voyage. Overlooking the absence of septa, he called it "Corne d'Ammon vivante." The only specimens he met with were dead, and were taken from the stomachs of Bonetas, which he supposed to have brought them up from great depths, little dreaming that hundreds of living specimens were nightly within his reach on the surface of the Ocean. Lately the genus has been re-discovered by the American French naturalists, the animal has been referred to its proper place in the system, and a scientific name has been conferred upon it by M. LESUEUR. I now come to my description of the allied genus, which

from its most obvious distinguishing character, the rapidity of convolution, I have named *Oxygyrus*. From  $\text{ὄξυς}$  *velox*, and  $\text{τυρρῶ}$  *incurvo*.

Class—*Gasteropoda*, CUVIER.

Order—*Nucleobranchi*, BLAINVILLE.

Fam. *Atlantidæ*, RANG.

Genus, *Oxygyrus*, mihi.

Char. Gen. TESTA subcartiluginosa, discoidea, cito convoluta, duobus lateribus similibus, utroque latere profundè umbilicata; anfractibus exterioribus antecedentes ferè amplexentibus; anfractu ultimo latè et acutissimè carinato; carinà ab ore usque ad dimidium peripheriæ extensâ, illuc desinente, extremitate angulatâ; aperturâ cordiformi, sinu carinam intrante.

*Operculum cordiforme, medio depressum, sabcanaliculatum.*

ANIMAL spirale, capite proboscidiiformi, tentaculis duobus brevibus cylindraceis, oculo magno saliente ad basin exteriorem munitis; ore terminali; branchiis pectiniformibus, inter jecur et penem obliquè sitis; pede alâ natando aptâ, foliaceâ, lobis duobus præditâ; lobo majore versùs extremitatem dilatato, cyatho ad latus posito; minore oblongo-ovato, membranaceo, tenuissimo, margine dentato, quasi rupto, operculum facie inferiore gerente; operculo corneo.

Shell subcartilaginous, quickly convolute; the first whorls being nearly enveloped by those succeeding, discoid, symmetrical, deeply umbilicated on each side; last whorl broadly and sharply keeled from the edge of the mouth to about half the circumference; keel angular at its posterior termination; aperture sinuous, heart-shaped, not entire, being encroached upon by the preceding whorl; peritreme acute, with a narrow slit or sinus on the front edge, running into the keel, which is there double.

Operculum heart-shaped, depressed, and channeled with a medial line.

Animal spiral. Head proboscidiiform, with two short cylindrical tentacula, having a large prominent eye on the exterior base of each. Mouth terminal. Branchiæ pectiniform, lying obliquely between the liver and the male organ. Foot a foliaceous swimmer, having two lobes, the larger widening toward the extremity, and having a lateral sucker; the smaller lengthened anteriorly, extremely thin, jagged, and bearing the operculum on its under surface. Operculum horny.

The animal much resembles that of *Atlanta*, but differs in the form of the greater lobe, the position of the sucker, and the foliaceous appendage to the operculated lobe of the foot, which is traversed by veins having the appearance of tendons, which admit of the contraction of the organ. The proboscidiiform head is more swelled towards

the centre and base, and is broader than that of *Atlanta*: the tentacula are much smaller in proportion, and the centre of the spire is occupied by the dark brown mass of the liver: whereas in *Atlanta* this part appears to be filled with a series of forms resembling ova.

The shell differs principally in having whorls closely convolute, and partly enveloping the preceding ones; while in *Atlanta*, the whorls are loosely rolled\*, and the keel (which stops short at half the circumference in *Oxygyrus*) runs on between the whorls, and connects them together. In *Atlanta* the form of the mouth, which is entire, is elliptical, with an operculum of the same shape. In *Oxygyrus* the operculum is cordiform, corresponding to the form of the aperture, and in the only species yet discovered the shell is cartilaginous, while in *Atlanta* it is testaceous. This cartilaginous shell shrinks in drying, particularly the last whorl, the centre ones appearing to be of firmer consistence. In the species described, the shell is tumid, herein widely differing from the very compressed and flattened form of *Atlanta*.

Having sketched the animals of both shells while alive, under the lens, I can speak confidently regarding their affinity, which I had noted as probable, before I had an opportunity of examining the animal of the new genus.

Like *Atlanta*, the animal moves by sudden starts, quickly agitating its swimmer. It occasionally adhered to the bottom of the vessels in which it was placed, by its sucker, which then was flattened out to the surface to which it adhered.

We first met with the shell in the Southern Atlantic from S. Lat. 15° to 20° 30' and between W. Long. 29° 30' and 23° 30'. In the Southern Indian Ocean, we again met with it in 29° 30' S. Lat. and 32° E. Long., and it continued to occur at intervals up the Bay of Bengal to N. Lat. 17° and E. Long. 87°. It has therefore a very extensive range of sea and climate, and I am surprised that the French naturalists, who have of late swept the seas with so much zeal and success, have not met with it.

The animal comes up to the surface, with the *Pteropodous mollusca* and the *Firolidæ*, shortly after sunset, and may then be taken with the tow-net. With this apparatus I was extremely successful, during my late voyage from England, in procuring Pelagian shells, as the following catalogue will shew. My example being followed by two other passengers, we allowed but few objects on our route to escape us. I was also enabled, with a throwing-net, to capture such large shells as were visible from the poop, and which would have otherwise

\* NOTE.—*Oxygyrus* bears to *Atlanta* nearly the same relation that *Orbulites* does to *Ammonites*.



passed at too great a distance from the vessel to have fallen into the line of the tow-nets.

*Gasteropoda.*

1. *Janthina*, 6 species.
2. *Litiopa* (RANG.), 2 species.
- 3, 4. Two new genera, which I have not yet sufficiently examined.
5. *Carinaria*, 2 new species.
6. *Atlanta* (LESUEUR), 2 species.
7. *Oxygyrus*, mihi, 1 species.

*Pteropoda.*

8. *Limacina*. A single new reversed species, being the second discovered of the genus, hitherto confined to Arctic regions. I took an unique specimen in Lat. 40° S. Long. 33° E.

9. *Hyalæa*, 9 species.
10. *Cleodora*, 3 species.
11. A new perforate genus allied to *Cleodora* (*rarissimum*).
12. *Cresis*, (RANG, Manuel des Mollusques, page 115,) 3 species.
12. *Cuvieria*, (RANG.) 2 species. Our capture of two perfect specimens of this shell will enable me to correct the character given by RANG, from imperfect specimens. Out of the number caught by us we took only two perfect specimens, one of which I unfortunately broke, its excessive fragility reducing it to the state in which RANG has described it.

*Cephalopoda.*

14. *Argonauta*, 1 new species.
15. *Spirula Peronii*.

*Cirrhipedes.*

16. *Anatifera*, 2 species.

*Iacertæ Sedis.*

17. *Campylonaus* (mihi). A new genus, which I am unable to assign to any known class or order, from the three specimens taken by Lieut. McNAIR being defective of the animal. I can only conjecture that it may belong to the *Firolidæ*, and that it is probably related to *Carinaria*.

It only remains to give the specific character of *Oxygyrus*.

*O. inflatus*. *Testa tumida, anfractibus transversè confertim striolatis; suturis profundè excavatis.*

Shell tumid, whorls transversely and closely striate; sutures deeply cut.

Calcutta, Feb. 21st, 1835.